

ABSTRACT

An engine starter includes a starter motor which has an armature, a series-wound field coil and a parallel-wound field coil and a short-circuiting unit for short-circuiting the series-wound field coil under a predetermined engine starting condition. The series-wound field coil has a suitable current limiting resistance. The short-circuiting unit short-circuits the series-wound field coil after a crankshaft of an engine passes a first top dead center of an engine.